SEQUENCE LISTING

(1) GENERAL INFORMATION:

   (i) APPLICANT: POWELL, Jerry S.

   (ii) TITLE OF INVENTION: HUMAN ERYTHROPOIETIN GENE: HIGH LEVEL
      EXPRESSION IN STABLY TRANSFECTED MAMMALIAN CELLS

   (iii) NUMBER OF SEQUENCES: 6

   (iv) CORRESPONDENCE ADDRESS:
      (A) ADDRESSEE: Dorsey & Whitney, LLP
      (B) STREET: Suite 3400, 1420 Fifth Avenue, U.S. Bank Centre
      (C) CITY: Seattle
      (D) STATE: Washington
      (E) COUNTRY: USA
      (F) ZIP: 98101

   (v) COMPUTER READABLE FORM:
      (A) MEDIUM TYPE: Floppy disk
      (B) COMPUTER: IBM PC compatible
      (C) OPERATING SYSTEM: PC-DOS/MS-DOS
      (D) SOFTWARE: MS-WORD

   (vi) CURRENT APPLICATION DATA:
      (A) APPLICATION NUMBER: Not Yet Assigned
      (B) FILING DATE: Concurrently Herewith

   (viii) PREVIOUS APPLICATION DATA:
      (A) APPLICATION NUMBER: US 08/466,412
      (B) FILING DATE: June 6, 1995

   (viii) ATTORNEY/AGENT INFORMATION:
      (A) NAME: Roberts, Mark W.
      (B) REGISTRATION NUMBER: 46,160
      (C) REFERENCE/DOCKET NUMBER: 500582.12

   (ix) TELECOMMUNICATION INFORMATION:
      (A) TELEPHONE: 206-903-8748
      (B) TELEFAX: 206-903-8820

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 2426 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

```
CCCGGTGTGG TCACCCGGCG CGCCCCAGGT CGCTGAGGGA CCCCGGCCAG
GCGCGGAGAT     60

GGGGGTGCAC GGTGAGTACT CGCGGGCTGG GCGCTCCCGC CCGCCCGGGT
CCCTGTTTGA     120

GCGGGGATTT AGCGCCCCGG CTATTGGCCA GGAGGTGGCT GGGTTCAAGG
ACCGGCGACT     180

TGTCAAGGAC CCCGGAAGGG GGAGGGGGGT GGGGCAGCCT CCACGTGCCA
GCGGGGACTT     240

GGGGGAGTCC TTGGGGATGG CAAAAACCTG ACCTGTGAAG GGGACACAGT
TTGGGGGTTG     300

AGGGGAAGAA GGTTTGGGGG GTTCTGCTGT GCCAGTGGAG AGGAAGCTGA
TAAGCTGATA     360

ACCTGGGCGC TGGAGCCACC ACTTATCTGC CAGAGGGGAA GCCTCTGTCA
CACCAGGATT     420

GAAGTTTGGC CGGAGAAGTG GATGCTGGTA GCCTGGGGGT GGGGTGTGCA
CACGGCAGCA     480

GGATTGAATG AAGGCCAGGG AGGCAGCACC TGAGTGCTTG CATGGTTGGG
GACAGGAAGG     540

ACGAGCTGGG GCAGAGACGT GGGGATGAAG GAAGCTGTCC TTCCACAGCC
ACCCTTCTCC     600
```

CTCCCCGCCT GACTCTCAGC CTGGCTATCT GTTCTAGAAT GTCCTGCCTG
GCTGTGGCTT   660

CTCCTGTCCC TGCTGTCGCT CCCTCTGGGC CTCCCAGTCC TGGGCGCCCC
ACCACGCCTC   720

ATCTGTGACA GCCGAGTCCT GCAGAGGTAC CTCTTGGAGG CCAAGAAGGC
CGAGAATATC   780

ACGGTGAGAC CCCTTCCCCA GCACATTCCA CAGAACTCAC GCTCAGGGCT
TCAGGGAACT   840

CCTCCCAGAT CCAGGAACCT GGCACTTGGT TTGGGGTGGA GTTGGGAAGC
TAGACACTGC   900

CCCCCTACAT AAGAATAAGT CTGGTGGCCC CAAACCATAC CTGGAAACTA
GGCAAGGAGC   960

AAAGCCAGCA GATCCTACGC CTGTGGCCAG GGCCAGAGCC TTCAGGGACC
CTTGACTCCC   1020

CGGGCTGTGT GCATTTCAGA CGGGCTGTGC TGAACACTGC AGCTTGAATG
AGAATATCAC   1080

TGTCCCAGAC ACCAAAGTTA ATTTCTATGC CTGGAAGAGG ATGGAGGTGA
GTTCCTTTTT   1140

TTTTTTTTTT CCTTTCTTTT GGAGAATCTC ATTTGCGAGC CTGATTTTGG
ATGAAAGGGA   1200

GAATGATCGA GGGAAAGGTA AAATGGAGCA GCAGAGATGA GGCTGCCTGG
GCGCAGAGGC   1260

TCACGTCTAT AATCCCAGGC TGAGATGGCC GAGATGGGAG AATTGCTTGA
GCCCCGGAGT   1320

TTCAGACCAA CCTAGGCAGC ATAGTGAGAT CCCCCATCTC TACAAACATT
TAAAAAAATT   1380

AGTCAGGTGA AGTGGTGCAT GGTGGTAGTC CCAGATATTT GGAAGGCTGA
GGCGGGAGGA   1440

TCGCTGGAGC CCAGGAATTT GAGGCTGCAG TGAGCTGTGA TCACACCACT
GAACTCCAGC   1500

CTCAGTGACA GAGTGAGGCC CTGTCTCAAA AAAGAAAAGA AAAAAGAAAA
ATAATGAGGG   1560

CTGTATGGAA TACGTTCATT ATTCATTCAC TCACTCACTC ACTCATTCAT
TCATTCATTC   1620

ATTCAACAAG TCTTATTGCA TACCTTCTGT TTGCTCAGCT TGGTGCTTGG
GGCTGCTGAG   1680

GGGCAGGAGG GAGAGGGTGA CATCCCTCAG CTGACTCCCA GAGTCCACTC
CCTGTAGGTC   1740

GGGCAGCAGG CCGTAGAAGT CTGGCAGGGC CTGGCCCTGC TGTCGGAAGC
TGTCCTGCGG   1800

GGCCAGGCCC TGTTGGTGAA CTCTTCCCAG CCGTGGGAGC CCCTGCAGCT
GCATGTGGAT   1860

AAAGCCGTCA GTGGCCTTCG CAGCCTCACC ACTCTGCTTC GGGCTCTGGG
AGCCCAGGTG   1920

AGTAGGAGCG GACACTTCTG CTTGCCCTTT CTGTAAGAAG GGGAGAAGGG
TCTTGCTAAG   1980

GAGTACAGGA ACTGTCCGTA TTCCTTCCCT TTCTGTGGCA CTGCAGCGAC
CTCCTGTTTC   2040

CTCCTTGGCA GAAGGAAGCC ATCTCCCCTC CAGATGCGGC CTCAGCTGCT
CCACTCCGAA   2100

CAATCACTGC TGACACTTTC CGCAAACTCT TCCGAGTCTA CTCCAATTTC
CTCCGGGGAA   2160

AGCTGAAGCT GTACACAGGG GAGGCCTGCA GGACAGGGGA CAGATGACCA
GGTGTGTCCA   2220

CCTGGGCATA TCCACCACCT CCCTCACCAA CATTGCTTGT GCCACACCCT
CCCCCGCCAC   2280

TCCTGAACCC CGTCGAGGGG CTCTCAGCTC AGCGCCAGCC TGTCCCATGG
ACACTCCAGT   2340

GCCACCAATG ACATCTCAGG GGCCAGAGGA ACTGTCCAGA GAGCAACTCT
GAGATCTAAG   2400

(2) INFORMATION FOR SEQ ID NO:2:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 30 amino acids
      (B) TYPE: amino acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Ala Pro Xaa Arg Leu Ile Leu Asp Ser Arg Val Leu Glu Arg Tyr Leu
1   5   10   15

Leu Glu Ala Lys Glu Ala Glu Xaa Ile Thr Asp Gly Gly Ala
      20   25   30

(2) INFORMATION FOR SEQ ID NO:3:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 7 amino acids
      (B) TYPE: amino acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: peptide

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
Glu Ala Lys Glu Ala Glu Asn
1   5

(2) INFORMATION FOR SEQ ID NO:4:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 20 base pairs
      (B) TYPE: nucleic acid

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

TTYTCDGCYT CYTTDGCTTC   20

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Glu Asn Ile Thr Asp Gly
1   5

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 23 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

AGCTCCTCCA TCAGTATTAT TTY

23